

No. 674,086.

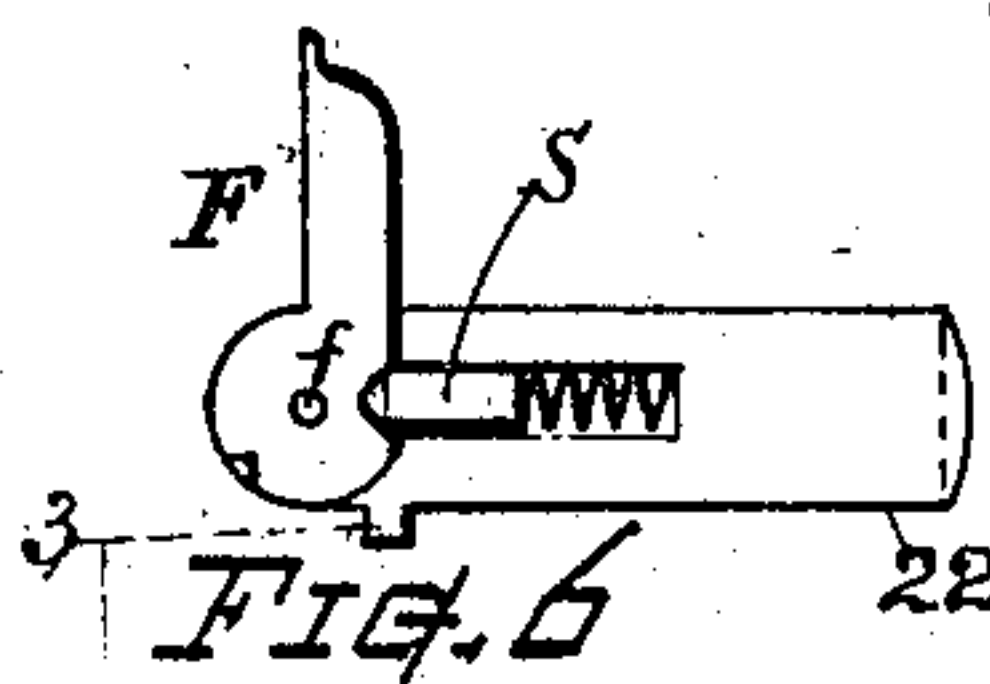
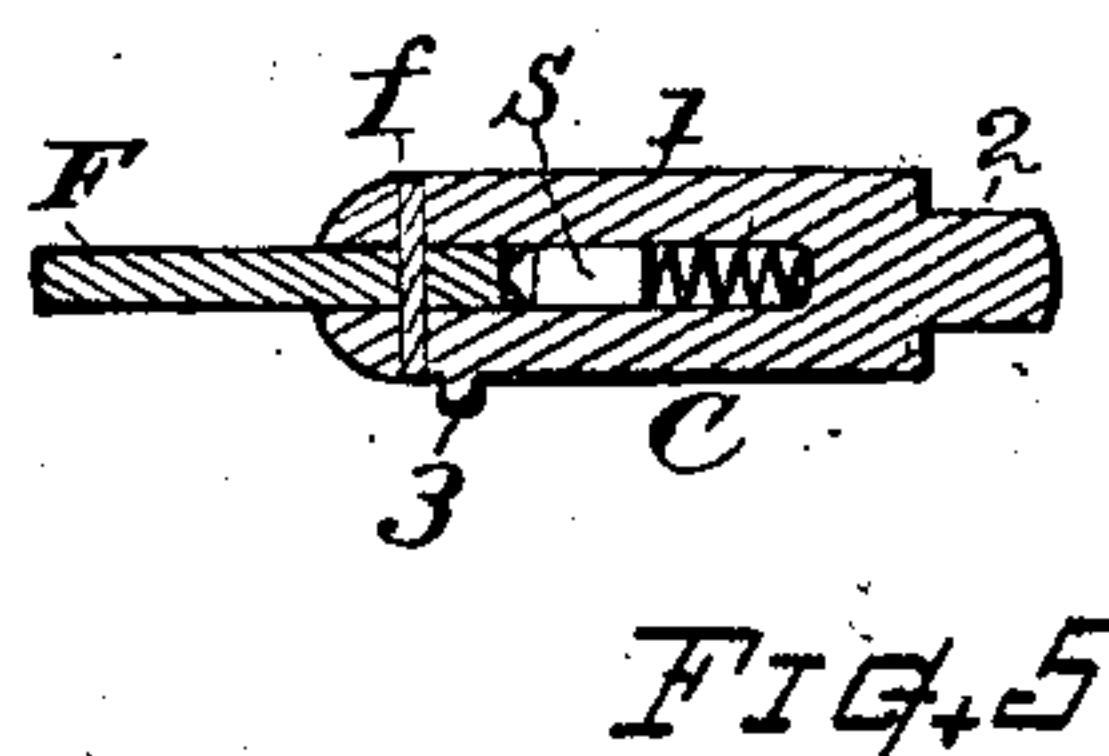
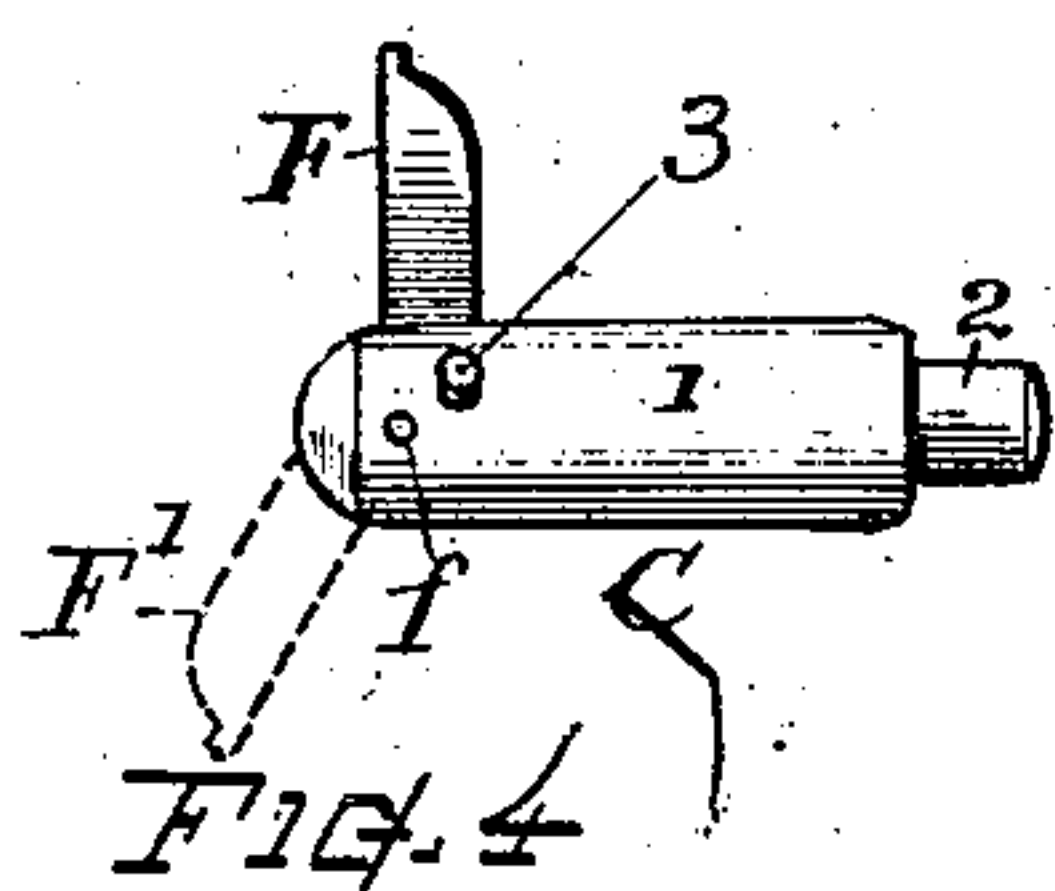
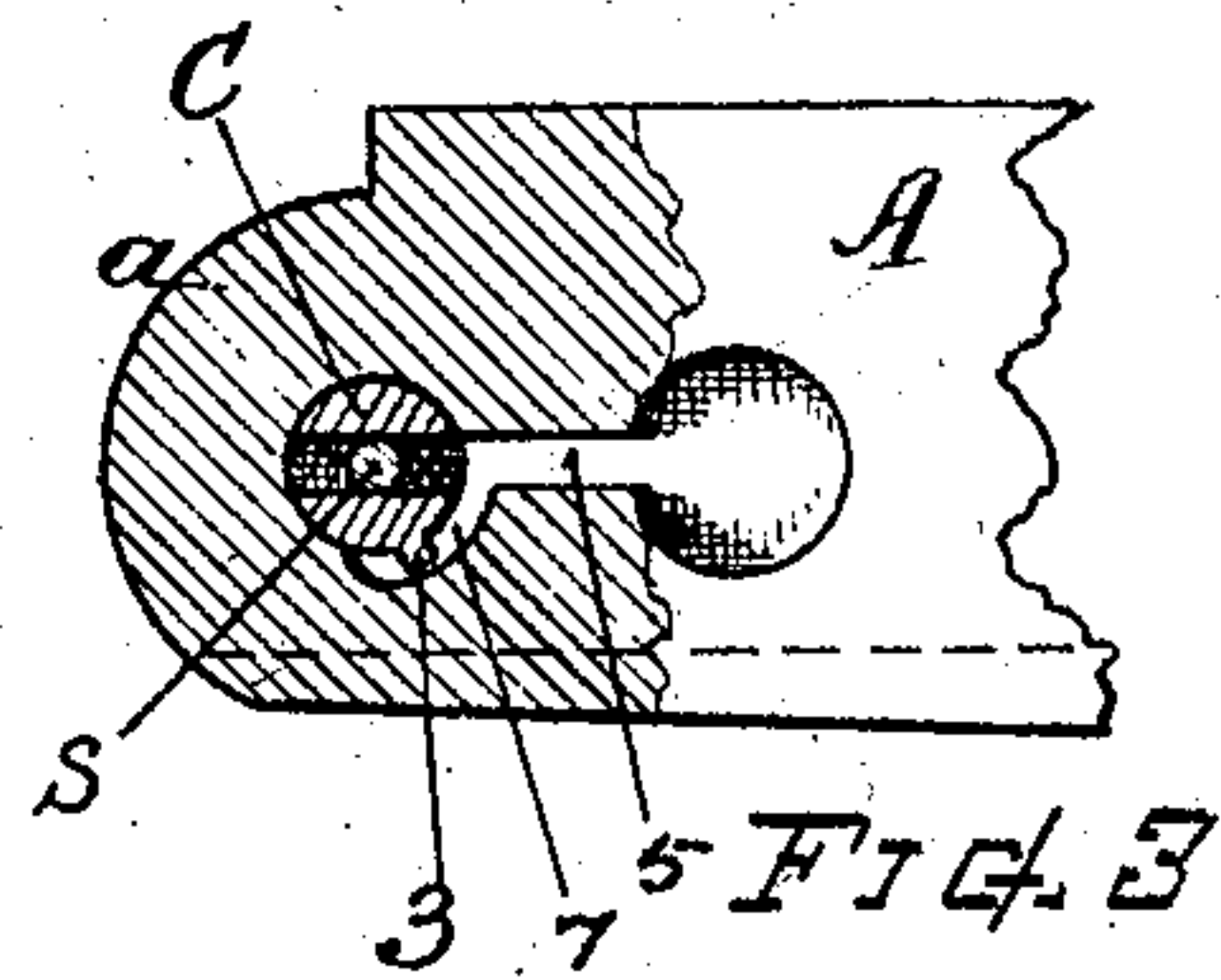
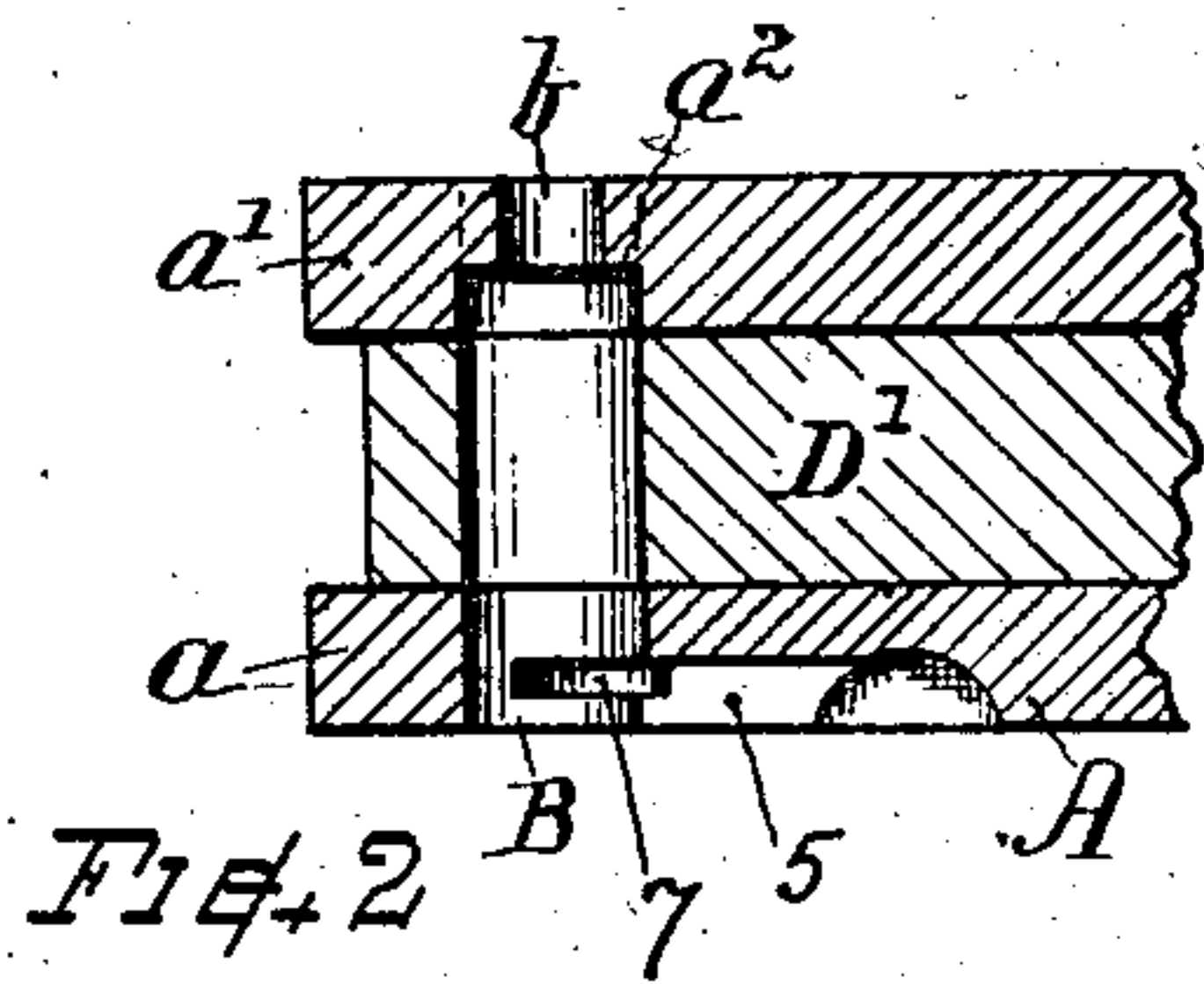
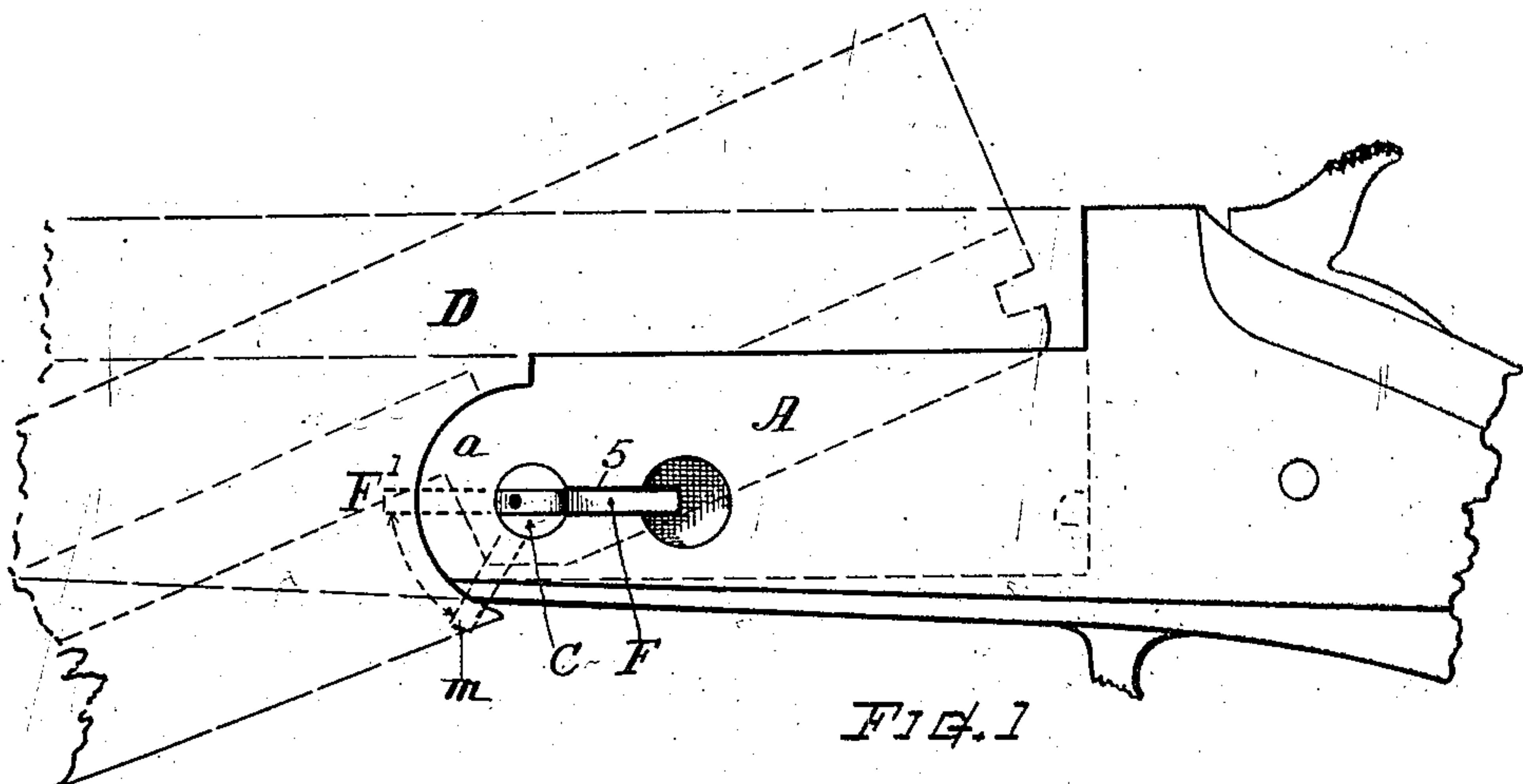
Patented May 14, 1901.

A. HANSON.

HINGE MECHANISM FOR BREAKDOWN GUNS.

(Application filed Dec. 31, 1900.)

(No Model.)



Witnesses.
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HINGE MECHANISM FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 674,086, dated May 14, 1901.

Application filed December 31, 1900. Serial No. 41,561. (No model.)

To all whom it may concern:

Be it known that I, ANDREW HANSON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Hinge Mechanism for Breakdown Guns, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of my present invention is to provide an efficient and desirable interlocking hinge-pin that can be quickly and conveniently inserted and removed for separating the stock and barrel of the gun and which will be securely and positively retained in place within the frame. This object I attain by the mechanism illustrated in the accompanying drawings, wherein—

Figure 1 represents a side view of a portion of a breakdown gun embodying my invention. Fig. 2 is a horizontal section through the frame at the hinge-pin seat. Fig. 3 is a transverse section at the position of the interlock recess or groove. Fig. 4 is an under side view of the hinge-pin with its locking-detents. Fig. 5 is a central longitudinal section of the hinge-pins, and Fig. 6 shows the side form of the catch devices and a modified hinge-pin end.

Referring to the drawings, A denotes the forward portion of the frame, having the bifurcation or hinging-cheeks $a a'$, which are transversely bored with holes B b for the reception of the joint-bolt or hinging-pin C, whereby the barrel D is hinged to said frame for the tilting or breakdown action.

In accordance with my present invention the hinge-pin is made with a plain cylindrical body 1 and a reduced non-threaded end 2, that respectively fit the holes B b in the cheeks $a a'$, and said hinge-pin is provided with a projecting stud, pin, or detent 3, that is rigidly fixed in and protrudes laterally from the cylindrical body at a position corresponding with the interior of the cheek a . The hole b in the cheek a' is formed with an offset or internal shoulder a^2 and a plain re-

duced non-threaded portion, as indicated, for receiving the end of the hinge-pin.

The head end of the hinge-pin is provided with a movable handle or manipulating appliance, preferably consisting of a swinging bar or member F, having its notched head pivoted at f within a slot formed transversely across the end of the hinge-pin. A spring-pressed stud is provided at S disposed in a hole in the pin C to press against the notched head for retaining the member F at normal position of interlocked adjustment.

The frame A is provided with a long recess 5 for reception of the member F, formed radial to the axis of the hinge-pin and sunk inward from the outside face of the cheek a and uniting with the pin-hole B. From the inner part of said recess or within the cheek a I have formed a shoulder or groove 7, partially circumferential in relation to the pin-hole B and practically perpendicular to the hinging-axis and of a dimension suitable for receiving the stud or detent 3, which engages therewith, and thus affords an interior interlock for securing the hinge-pin against endwise displacement.

The swinging member F can be turned down into the radial recess 5, and therein it forms an exterior interlocking device that when closed down prevents rotative movement of the hinge-pin C and when raised or disengaged from its interlocked position serves as a handle to facilitate the manipulation or movement of said hinge-pin for unlocking the stud 3 from the groove 7, which is accomplished by swinging the arm F to the position shown by dotted lines F' and then rotatively to the position indicated by dotted lines m on Fig. 1, when the hinge-pin can be pulled out endwise.

When assembling the hinge-pin C in the frame A, its body is passed into the hole B with the projecting stud 3 in line with the recess 5. When the hinge-pin is home, the stud is within the cheek a and in conjunction with the groove 7. The pin is then rotated a partial turn, interlocking the detent 3 within said groove 7 in a manner to resist endwise movement of the hinge-pin and also bringing the member F into coincidence with the radial

recess 5. Then by closing said handle member into the recess 5 an exterior interlock is effected that prevents the rotative movement of the hinge-pin. The two sets of interlocking devices as combined in the barrel-hinge provide a neat, simple, convenient, and efficiently secure connection that can be economically manufactured and which can be readily manipulated by the user of the gun.

10 In some instances the hinge-pin may be made straight, cylindrical, or full size at its non-threaded end, as at 22, Fig. 6. In such case the shoulder a^2 would be omitted and the hole b formed of full uniform size.

15 It is not intended herein to claim, broadly, a pivoted arm, as F, and its spring devices S, in combination with a hinge-pin, as I am aware that such arm has heretofore been employed in a screw-threaded pin; but my invention 20 relates to the improved combinations herein-after defined.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. In a breakdown gun, the combination, 25 with the forward portion of the frame formed with transversely-perforated hinge-cheeks, and the barrel-hinging lug; of the non-threaded hinge-pin insertible endwise through said frame and lug, and having a plain bearing end 30 surface slidably fitted into the non-threaded opening in the frame-cheek, said hinge-pin and frame provided with internal interlocking devices adapted for securing the hinge-pin against endwise displacement, and external interlocking devices adapted, when closed 35 into interlocked position, for preventing rotative movement of said hinging-pin, and adapted, when disengaged from interlock po-

sition, to serve as a handle to facilitate the removal of said hinge-pin, substantially as 40 set forth.

2. In a breakdown gun, the hinge-pin provided with a fixed protruberant stud or detent projecting laterally from its surface, and provided with a movable catch device in the 45 head of said hinge-pin; in combination with the frame having a recess, groove or shoulder in circumferential relation to the pin-hole opening for engaging said detent, and a radial recess in the side face of the frame into which 50 said catch device closes to lock said hinge-pin non-rotative in the frame.

3. In a breakdown gun, the combination of the frame having its hinge-cheeks at the forward portion respectively fitted, one with an 55 interior shoulder and reduced non-threaded opening, the other with a transverse hinge-pin hole therethrough, and provided with a radial recess in the side face, and a circumferential groove at the side of said hinge-pin hole adjoining the same, a hinge-pin having the cylindrical body with non-threaded reduced end, and provided with a laterally-projecting stud or detent adapted for engaging in said 60 groove, a swinging catch-bar pivoted in the head of said hinge-pin adapted for engaging said radial recess, and a spring-pressed stud within the hinge-pin for retaining the catch-bar at adjusted position, all substantially as 65 shown and described.

Witness my hand this 28th day of December, 1900.

ANDREW HANSON.

Witnesses:

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